

II. Receiving Waters Limitations (RWL)

City of Malibu

FY 2011-2012

- A. Are you aware, or have you been notified, of any discharges from your MS4 that cause or contribute to a condition of nuisance or to the violation of any applicable water quality standards?*

No (and Other)**, during FY 2011-2012, the City has not been notified and is not aware of any discharges from its MS4 that cause or contribute to a condition of nuisance or violation of any applicable water quality standards. The City is aware of water quality exceedances in the receiving waters adjacent to the City, but has no information demonstrating that discharges from the City's MS4 are causing or contributing to such exceedances.

- B. Has the Regional Board notified you that discharges from your MS4 are causing or contributing to an exceedance of water quality standards?*

No**, the Regional Board has not notified the City that any discharges from its MS4 are causing or contributing to an exceedances of water quality standards during FY 2011-2012.

**The following discussion provides some context for the City's determination that discharges from its MS4 are not causing or contributing to a condition of nuisance or to the violation of any applicable water quality standards, and that the RWQCB has not notified the City that discharges from the MS4 are causing or contributing to exceedances. This discussion also provides an update of any new information since last year's report.

The City is aware of historic exceedances of water quality standards that were discovered during sampling of receiving waters conducted on the City's behalf, for required monitoring pursuant to this Order No. 01-182, the Malibu Creek Bacteria Total Maximum Daily Load (TMDL) Compliance Monitoring Plan, and the Santa Monica Bay Beaches (SMBB) Bacteria TMDL Coordinated Shoreline Monitoring. However, the City has no information that discharges from its MS4 are causing or contributing to the exceedances in the receiving waters.

The storm drain and natural creek outlets that have been monitored as part of the Santa Monica Bay Beaches Bacteria TMDL Coordinated Shoreline Monitoring program are not owned or operated by the City. Most monitoring in this program occurs at the shoreline mouths of natural creeks and gullies from canyons. Additionally, some of these subwatersheds have no contribution whatsoever from the City's MS4. There is minimal infrastructure in many of these areas, and the City does not own or operate an extensive or modern system of curb and gutter, drainage pipes or flood control channels. In Malibu, there are approximately 232 total catch basins/culverts that the City maintains (cleans and marks with a "No Dumping" message), there are no open channels in Malibu's MS4, only a couple small channels in Malibu that are part of Los Angeles County Flood Control District's (LACFCD) MS4, and the City has approximately 21,755 feet of closed storm drain. Despite having other agencies own portions of the MS4 in Malibu, the system is unlike most areas of Los Angeles County (where there is an elaborate system of co-mingled jurisdictions throughout the countywide MS4).

Unlike most of the County, much of the City's MS4 is in rural and rugged settings and consists of a series of singular inlet structures (sometimes with an under-road connector pipe), which then outfall to the sides of vegetated canyons. Appendix A (attached) provides an aerial image of the MS4 of multiple agencies (not necessarily connected to each other) and each of the subwatersheds contributing to the shoreline monitoring locations, which are the focus of this response. Sampling at the outfalls of the City's portion of the MS4 is not required, and the City has not conducted such sampling of City outfalls to receiving water at this time. Therefore, the City of Malibu is not aware of, nor does the City have reason to believe, any discharges directly from the MS4 have caused or contributed to violations of water quality standards.

The City of Malibu received a Notice of Violation (NOV) and 13383 Order from the Los Angeles Regional Water Quality Control Board dated March 4, 2008 stating that the City is in violation of waste discharge requirements established in Board Order No. 01-182 as amended by Orders R4-2006-0074 and Order No R4-2007-0042 (MS4 Permit). Regional Board technical staff had concluded that violations of the Receiving Waters Limitations provisions of Part 2.5 of the MS4 Permit had occurred due to alleged discharges from the MS4 that caused or contributed to exceedances of bacterial objectives during Summer Dry Weather as established through the Basin Plan Amendment for Santa Monica Bay Beaches. There was no evidence demonstrating that the City's MS4 caused or contributed to those exceedances, and the City responded to the NOV and Order on May 21, 2008 and petitioned the State Water Resources Control Board (SWRCB) challenging the NOV and Order, which was held in abeyance.

The City was surprised to receive a Second Notice of Violation in October 2009, relating back to the same violations alleged in the original NOV and Order. The information provided in response to its May 21, 2008 Response to the Notice of Violation and Order was responsive to the 13383 Order. The City submitted its response to the second NOV on December 1, 2009. Ultimately, during the 2010-2011 reporting year, the Regional Board removed the Santa Monica Bay Bacteria Dry Weather TMDL from the permit, and later the Regional Board Executive Officer rescinded the NOVs issued to the City in 2008 and 2009, which had originally triggered the need to file prior RWL Compliance Reports and status updates covering certain portions of the MS4.

In February 2008 (2007-2008 reporting year) the Natural Resources Defense Council (NRDC) and Santa Monica Baykeeper filed a citizen suit against the City of Malibu, which was subsequently amended to incorporate allegations regarding compliance with Bacteria TMDL requirements. The lawsuit stemmed from three Notices of Intent to Sue served on the City on May 31, 2007, September 10, 2007 and December 19, 2007 against the County of Los Angeles and the City of Malibu alleging exceedances of various pollutants from monitoring completed between the years of 2002-2007. The lawsuit alleged exceedances from the following monitoring programs: Santa Monica Bay Beaches Bacteria TMDL Coordinated Shoreline Monitoring, LA County NPDES Storm Water Annual Monitoring, and Tapia Wastewater Treatment Plant Monitoring.

One of the issues litigated in that case was whether discharges from the City's MS4 into the Area of Special Biological Significance (ASBS) were causing or contributing to violations of water quality standards. The City has no information that any potential discharges are changing the

natural water quality in the ASBS. In fact, studies conducted as part of the Bight 08 Program found that overall ASBS receiving water quality is in good condition. It also found that water quality results at ASBS discharge sites in receiving water were similar to reference sites. On average, the range of post-storm pollutant concentrations in receiving waters sampled near regulated ASBS discharge sites was not significantly different from post-storm concentrations at reference sites. In addition, there was no consistent increase from pre- to post-storm concentrations at either reference or regulated ASBS discharge locations, showing that discharges did not seem to alter background water quality. On March 20 2012, the SWRCB granted the City (and other dischargers) an exception to the Ocean Plan waste discharge prohibition. The Exception also includes a list of special protections for the ASBS, through which certain discharges to the ASBS are regulated and permitted.

Towards the end of the lawsuit, which has now been settled between the parties, the Santa Monica Baykeeper compiled additional bacteria data from sampling conducted along the coast of Malibu. After extensive review and based on the City's understanding of that data, the City determined that this data did not demonstrate that the City's MS4 caused or contributed to a condition of nuisance or violation of any applicable water quality standards.

Based on receipt of the 2008 and 2009 NOV's from the Regional Board and for the reasons expressed in the annual RWL Compliance Reports and Compliance Status Reports from 2006 through 2011, and in a good faith effort to comply with the permit requirements as the City understood them, the City submitted RWL Compliance Reports and subsequent *annual* Compliance Status Reports every year since the 2006-2007 annual report. As noted in those reports, the City's obligations under the RWL portion of the permit were growing increasingly unclear. In an abundance of caution, the City has submitted an RWL Report, or a status report containing the same information as a full RWL report, every year since 2006-2007, even if an RWL report was not technically required under the permit. The following is a listing of the City's RWL reporting for the past five reporting years.

Reporting Year	Question A Response	Question B Response	City's Submittal
2006-2007	No	No	RWL Report submitted explaining why the City answered the questions "No"
2007-2008	Yes	Yes	RWL Report submitted
2008-2009	Yes	Yes	Status Report
2009-2010	No	No	Status Report
2010-2011	No	No	Status Report

Following submittal of these Compliance Reports and Compliance Status Reports, the City did not receive a request from the Regional Board to modify the Reports in accordance with Part 2. 3. b) of the MS4 Permit. Absent any such request from the Regional Board, the City assumed that the measures described in the RWL Compliance Report and Compliance Status Reports were satisfactory to the Regional Board. The MS4 Permit only requires the City to provide a RWL Compliance Status Report in alternating years following submittal of the first report. Thus, the City is not required to submit a Compliance Status Report for the 2011-2012 reporting year.

While not required to provide a RWL Compliance Report or Compliance Status Report this year, the City is nevertheless providing the RWQCB any new information from the past reporting year in a good faith effort to fully apprise the Board of the City's activities. This information includes a description of new projects that the City has committed to over this past reporting year, which are beginning just as this report is being written and will be ongoing over the course of the next few reporting years.

Natural Sources of Fecal Indicator Bacteria and Protecting Public Health

Over the past few years, new research has informed us a great deal on the sources of bacteria. It is from these studies that the City and all stakeholders are gaining a better understanding of the complex local hydrology and how the City's MS4 discharges may or may not be impacting the water quality, and how water quality regulations need to take into account other sources of pollutants. For example, the United States Geological Survey (USGS) completed a study¹ evaluating the occurrence, distribution and sources of fecal indicator bacteria (FIB) and nutrients in shallow groundwater, Malibu Lagoon and near-shore ocean waters in dry and wet weather. The final peer-reviewed manuscript has recently been published. Both the abstract and report can be viewed at this link <http://iris.lib.neu.edu/aes/vol6/iss1/4>. USGS studies in both Santa Barbara and Malibu show that kelp wrack is a major contributor of elevated FIB. In 2009 and 2010, the USGS learned that bacteria in the near-shore ocean in Malibu were also associated with the presence of kelp. Using the newest bacteria source identification tools, researchers are consistently finding that *in both wet and dry weather*, non-human influenced beaches do have high bacteria even when there are no storm drain discharges present. Extensive research has confirmed that tide, temperature, wind and the time of day samples are collected all affect bacteria concentrations. The results show that in dry weather, FIB was coming from surface deposits along the berm and nearby sand, as well as from the bottom of the Lagoon, as it was disturbed during tidal activity. The USGS is learning that bacteria in the near-shore ocean were associated with tidal fluxes, with highest bacteria concentrations occurring during high tide. This is consistent with wave run-up on the beach washing FIB from the wrack line and beach sands. Water movement through the berm at the mouth of the Lagoon was a source of FIB to the near-shore ocean during low tide, and groundwater bacteria concentrations were low at low tide. Natural lagoon conditions are a breeding ground for bacteria. Also, the USGS study (tested both inside and out of the Lagoon) shows that bacteria passes through the sand berm. Bacteria counts were higher at night when there is less chance for solar disinfection and much lower in the afternoon after the sun's heat penetrated the water to kill the bacteria. Bacteria counts were also highest during high tide. Tidal and temporal influences impact the existence of bacteria. This explains the occurrence of FIB exceedances observed at the shoreline monitoring near the outlet of Malibu Creek and Lagoon. Tidal influences of natural sources of FIB could also explain other shoreline exceedances.

Further, other researchers are confirming that environmental factors influence bacteria exceedances along Malibu's coast to a greater extent than previously considered. Published

¹ 2009. Preliminary Summary Letter from P. Martin of USGS Regarding Cooperative Water-Resources Study. Malibu, California.

research undertaken by UCLA and Stanford² confirms the USGS results that kelp and bird and brine fly feces deposited in the kelp wrack directly influence water quality. The studies have shown that the source or combination of sources of FIB to near-shore ocean water is not precisely known, but includes sources other than stormwater. The City of Malibu has requested that the Regional Water Quality Control Board consider allowing natural sources exclusions for fecal indicator bacteria exceedance rates for the Santa Monica Bay Beaches and Malibu Creek and Lagoon Bacteria TMDLs.

Concurrently, the federal Environmental Protection Agency and a growing body of experts with peer-reviewed research have a greater understanding of the level of public health risk associated with natural and non-human sources of bacteria. Because the emerging science is critical to local decisions, the City is active in the SWRCB's Beach Water Quality Work Group that keeps track of best available science related to public health and will host a State of the Science Symposium with these experts to ensure broad dissemination of critical information. The City is also working on an enhanced outreach program, and the Malibu City Council has recently allocated \$250,000 for an Ocean Health Near-Shore Water Quality Assessment (Assessment) project that will also help foster the best available science related to public health.. The City's Assessment will focus on assessing public health risks by identifying safe and healthy beaches within the City of Malibu and providing the public with timely and meaningful information on such risks before they come to the beach, and not the day after. The information gathered from the Assessment will help the City, and all stakeholders, better understand the coastal hydrology in the Santa Monica Bay.

Environmental influences and sources of elevated bacteria in the rural watersheds of North Santa Monica Bay are complex, and advancing science is indicating that levels of bacteria may also be linked with bather densities. The City recognized that in order for all stakeholders to fully understand these issues it was important to collaborate with other organizations and recognized experts, and participate in projects that will add value to its Assessment. Therefore, City staff is now a member of a technical advisory committee for a predictive modeling project being conducted by Stanford University in partnership with Heal the Bay, and the City is also a project partner for two new proposed studies. One study is a microbial source research and epidemiological project with UC Berkeley School of Public Health and Lawrence Berkeley National Laboratories, and the other is collaboration with public health experts to evaluate potential new public noticing protocols for local beaches.

ASBS Exception Special Protections

As mentioned, the State adopted an exception to the Ocean Plan allowing stormwater and certain dry-weather discharges to the ASBS. With this exception, covered agencies are required to implement a suite of programs called "Special Protections" to preserve natural water quality in the ASBS, and implement related monitoring. The City is preparing to participate in a regional monitoring program in the upcoming wet season. The City has also already begun complying with the Special Protections with the implementation of two Proposition 84 funded projects: Broad Beach Road Biofiltration; and Wildlife Road Treatment and Focused ASBS Outreach.

2 April 2011. Imamura et. al. Wrack promotes the persistence of fecal indicator bacteria in marine sands and seawater.

The focused outreach component includes a two-year staff position “Coastal Preservation Specialist” (CPS) to conduct targeted outreach to homeowners, property managers, visitors, students, architects, contractors, landscapers and City staff to inform people about the ASBS and methods of keeping polluted runoff from reaching the ocean. The program targets: water conservation; elimination of dry-weather discharges including incidental flows due to residential activities such as excessive irrigation, surface cleaning, and car washing; elimination of illicit discharges such as potential gray water connections; and reducing stormwater flow by retrofitting residential landscapes and incorporating low-impact development into outdoor living spaces.

The construction projects include drainage infrastructure improvements involving runoff reduction (through infiltration where feasible), biofiltration, and treatment for inlets that would discharge to the ASBS. These construction projects are already in the design phase and will eliminate all potential dry-weather runoff to the ASBS, and treat some wet weather flows. The Broad Beach project is proposed to be a “green street” type of retrofit, and the Wildlife Road project proposes incorporate low impact development elements with drainage treatment improvements.

Prior to the construction of the Proposition 84 projects and completion of the focused outreach program to eliminate dry weather discharges and prevent pollution to the ASBS, the City has taken extra steps to ensure no dry weather discharges will reach the ASBS. On July 11, 2012, the City placed 6 mil thick plastic sheeting over storm drain inlets with the potential to contribute discharges to ASBS. The plastic was placed over the inlets by sand bags and is secured by sand bags. This system eliminates the non-storm water discharges by preventing any flow from entering into the inlets. The sheeting will be removed prior to storm events. Further, the City will screen these areas to make sure there is no dry-weather runoff and that the covers are providing the intended protection until any required permanent source control measures are in place under the City’s ASBS Compliance Plan (a requirement of the special protections).

Pollution Prevention from Equestrian Related Activities

Another project that the City is working on is development of an implementation plan to facilitate pollution prevention in Serra Retreat with a focus on animal waste management practices (primarily from equestrian related activities). As part of the plan, the City will facilitate implementation of low impact development principles appropriate for the represented land uses, topography, and soils in the Serra Retreat area to prevent discharges of animal waste from Serra Retreat to Malibu Creek and Lagoon. Successful strategies employed in this subwatershed area will be considered for implementation elsewhere in the City.

In summary, the City has no evidence demonstrating that discharges from the City’s MS4 cause or contribute to a violation of water quality standards. Past exceedances of water quality standards in the receiving waters have, however, prompted the City to evaluate its stormwater program and further investigate sources of potential pollutants and ways to treat and prevent stormwater runoff and take proactive actions accordingly. Thus the City has implemented one of the most aggressive Clean Water Programs in the state, and will continue this program with increased vigor and attention. As set forth and detailed in the City’s various letters to the Regional Board such as the City’s May 21, 2008 and December 1, 2009 responses to Notices of

Violation, the City's April 30, 2012 Response to the Regional Board's March 29, 2012 request for information, the May 7, 2012 comments on Bacteria TMDLs Revisions for Santa Monica Bay Beaches, and in its all of its RWL related reports, the City does not necessarily concede responsibility for the alleged exceedances at any of the monitoring locations and has provided information as a good faith means of fully apprising the Regional Board of its activities and to comply with the provisions of the MS4 permit.